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Amendments to the Claims

A listing of the claims, with Claims 2 and 4-24 as currently amended and Claim 25 as added, is presented below.

1. (Original) System for conducting chemical and/or biochemical reactions, comprising a reaction substrate with a multiplicity of reactor zones, said reaction substrate having a substantially flat top surface and a substantially flat bottom surface, the reaction substrate being porous with a multiplicity of essentially parallel pores enabling liquid flow through, said pores having a diameter of about 10 $\mu$m to 10 nm, characterized in that said flat top surface is bonded to the bottom of a first rigid support, said rigid support comprising a multiplicity of through going holes extending from the top of said rigid support to the bottom of said rigid support, and said through going holes defining the reactor zones.

2. (Currently Amended) System according to ~~the previous claim~~ Claim 1, wherein a subset of said holes are~~, possibly~~ reversibly~~,~~ masked.

3. (Original) System for conducting chemical and/or biochemical reactions, comprising a reaction substrate with a multiplicity of reactor zones, said reaction substrate having a substantially flat top surface and a substantially flat bottom surface, the reaction substrate being porous with a multiplicity of essentially parallel pores enabling liquid flow through, said pores having a diameter of about 10 $\mu$m to 10 nm, characterized in that part of said pores are masked by filling said pores with a masking polymer, the masked pores defining the outer borders of the reactor zones.

4. (Currently Amended) System ~~for conducting chemical and/or biochemical reactions~~ according to Claim 1, ~~comprising a reaction substrate with a multiplicity of reactor zones, said reaction substrate having a substantially flat top surface and a substantially flat bottom surface, the reaction substrate being porous with a multiplicity of essentially parallel pores enabling liquid flow through, said pores having a diameter of about 10 μm to 10 nm,~~ characterized in that ~~(i)~~ part of said pores are masked~~,~~ by filling said pores with a masking polymer, the masked pores defining the outer borders of the reactor zones~~; and (ii) said flat top surface is bonded to the bottom of a first rigid support comprising a multiplicity of through going holes extending from the top of said rigid support to the bottom of said rigid support, and said through going holes defining the reactor zones~~.

5. (Currently Amended) System according to ~~any of the previous claims~~ Claim 1, wherein chemical moieties, chemical building groups, chemical monomers, molecules or polymers are anchored to the walls of said pores.

6. (Currently Amended) System according to any ~~of claims 2 to 5~~ Claim 3, wherein said masking is carried out by a masking polymer~~, including polyacrylamide,~~ photocrosslinkable masking polymers and photoreactive glues.

7. (Currently Amended) System ~~for conducting chemical and/or biochemical reactions~~ according to ~~any of the previous claims~~ Claim 1, wherein said chemical and/or biochemical reactions are monitored optically.

8. (Currently Amended) System according to ~~any of the previous claims~~ Claim 1, wherein said chemical and/or biochemical reactions are polymer synthesis reactions, ~~including~~ nucleotide synthesis reactions, peptide synthesis reactions, ~~and~~ or sugar polymer synthesis reactions.

9. (Currently Amended) System according to ~~any of the previous claim~~s Claim 1, wherein said reaction substrate is made of an organic or inorganic material~~, such as aluminium oxide~~.

10. (Currently Amended) System according to ~~any of the previous claim~~s Claim 1, wherein said reaction substrate is optically transparent or translucent.

11. (Currently Amended) System according to ~~claims 1, 2, or 4~~ Claim 1, wherein said rigid support is bonded to the reaction substrate by moulding, ~~glueing~~ gluing, thermal bonding, laserwelding, or chemical bonding ~~and the like~~.

12. (Currently Amended) System according to ~~the claims 1, 2 or 4~~ Claim 1, wherein, said rigid support is a chemical and/or temperature resistant material~~, such as Topas ®~~.

13. (Currently Amended) System according to ~~the claims 1, 2, or 4~~ Claim 1, wherein said holes of said rigid support reversibly contain reaction components.

14. (Currently Amended) System according to ~~any of the previous claim~~ Claim 1, wherein said holes contain a solvent, reagent, wash solution, enzymes or monomer used for the polymer synthesis reaction.

15. (Currently Amended) System according to ~~any of the previous claims~~ Claim 1, comprising a means for applying a pressure.

16. (Currently Amended) System according to ~~any of the previous claims~~ Claim 1, comprising a means for inducing a reversible flow through said reaction substrate.

17. (Currently Amended) System according to ~~any of the previous claims~~ Claim 1, comprising a reaction manifold for selectively delivering particular solvents, reagents, wash solutions, enzymes and/or monomers to said reaction zones.

18. (Currently Amended) System according to ~~the claims 1, 2 or 4~~ Claim 1, wherein said rigid support has at least 96, 384 or 1536 holes or reactor zones.

19. (Currently Amended) System according to ~~any of the previous claims~~ Claim 1, wherein the bottom surface of said reaction substrate is bonded to the top of a second rigid support, said second rigid support having through going holes extending from the top of the second rigid support to the bottom of the second rigid support, and said holes of the second rigid support are aligned with the holes of the first rigid support.

20. (Currently Amended) System ~~Use of the system~~ according to ~~any of the previous claims~~ Claim 1, which is used for ~~conducting chemical and biochemical reactions, including~~ the synthesis of polymers.

21. (Currently Amended) System ~~Use of the system~~ according to ~~any of the previous claims~~ Claim 5, wherein said polymers are oligonucleotides, peptides or sugar chains.

22. (Currently Amended) System ~~Use of the system~~ according to ~~any of the previous claims~~ Claim 1, which is used for ~~synthesising~~ synthesizing in parallel different polymers.

23. (Currently Amended) Process to ~~synthesise~~ synthesize polymers, characterized in that said polymers are attached to the pores of a system according to ~~any of the previous claims~~ Claim 1.

24. (Currently Amended) Apparatus for conducting chemical and/or biochemical reactions comprising a system according to ~~any of the previous claims~~ Claim 1, an incubation device for holding said system, a loading station, ~~possibly~~ optionally a dispensing and aspiration station, ~~possibly~~ optionally a pressure or vacuum application station, and ~~possibly~~ optionally a reading station.

25. (New) System according to Claim 9, wherein said reaction substrate is made of aluminium oxide.